

Appl. No. 10/796,859
Amendment dated August 23, 2005
Reply to Office Action of February 23, 2005

Amendments to the Specification

Please replace the paragraph on page 10, lines 1-17 with the following amended paragraph:

Referring to Fig. 2 and 3, a current reference circuit may include a positive and negative feedback loop. The positive feedback loop may include transistors M1, M2, M8, M9, and M4 ~~M4, M5, M6, M9, and the resistors (i.e., R2, R1, and R3, R4)~~. The current through resistor R2, R1 is mirrored from transistor M5 to transistor M4 using a floating current mirror and fed back with a gain greater than 1. Since a floating current mirror is used, sensing and regenerating the load resistor current for the positive feedback does not require the additional MOSFET threshold used by a typical current mirror (with source to VPWR or VGND). Instead, the gates of transistor M5 and transistor M4 can be tied to a fraction of the load resistor voltage, allowing their shared source to match their currents. The gate could be tied to VGND if transistor M3 of the negative feedback loop did not require any Vds saturation voltage. Often very little saturation voltage is required, as transistor M3 is large.